

## CLAIMS:

1. A selector (502) for selecting a background motion vector for a pixel in an occlusion region of an image, from a set of motion vectors being computed for the image, the selector (502) comprising:

- computing means (510) for computing a model-based motion vector for the  
5 pixel on basis of a motion model being determined on basis of a part of (402-436) a motion vector field (400) of the image;
- comparing means (511) for comparing the model-based motion vector with each of the motion vectors of the set of motion vectors; and
- selecting means (512) for selecting a particular motion vector of the set of  
10 motion vectors on basis of the comparing and for assigning the particular motion vector as the background motion vector.

2. A selector (502) as claimed in claim 1, wherein the part of the motion vector field (400) corresponds with motion vectors being estimated for groups of pixels in the  
15 neighborhood of the borders of the image.

3. A selector (502) as claimed in claim 1, wherein the comparing unit is arranged to compute differences between the model-based motion vector and the respective motion vectors of the set of motion vectors and the selecting unit is arranged to select the particular  
20 motion vector if the corresponding difference is the minimum difference of the differences.

4. A selector (502) as claimed in claim 1, wherein the motion model comprises translation and zoom.

25 5. An up-conversion unit (500) for computing a pixel value in an occlusion region of an output image, on basis of a sequence of input images, the up-conversion unit (500) comprising:

- a motion estimation unit (504) for estimating motion vectors of the image, the motion vectors forming a motion vector field (400);

- a detection unit (508) for detecting the occlusion region in the image, on basis of the motion vectors;

- a motion model determination unit (505) for determining a motion model on basis of a part of (402-436) the motion vector field (400);

5                   - an interpolating unit (506) for computing the pixel value by means of temporal interpolation, on basis of a background motion vector; and

- the selector (502) for selecting the background motion vector for the pixel, as claimed in claim 1.

10   6.           An image processing apparatus (600) comprising:

- receiving means (602) for receiving a signal corresponding to a sequence of input images; and

- an up-conversion unit (500) for computing a pixel value in an occlusion region of an output image, as claimed in claim 5.

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7.           An image processing apparatus (600) as claimed in claim 6, characterized in further comprising a display device (606) for displaying the output image.

8.           An image processing apparatus (600) as claimed in claim 7, characterized in  
20   that it is a TV.

9.           A method of selecting a background motion vector for a pixel in an occlusion region of an image, from a set of motion vectors being computed for the image, the method comprising:

25                   - computing a model-based motion vector for the pixel on basis of a motion model being determined on basis of a part of (402-436) a motion vector field (400) of the image;

- comparing the model-based motion vector with each of the motion vectors of the set of motion vectors; and

30                   - selecting a particular motion vector of the set of motion vectors on basis of the comparing and for assigning the particular motion vector as the background motion vector.

10. A computer program product to be loaded by a computer arrangement, comprising instructions to select a background motion vector for a pixel in an occlusion region of an image, from a set of motion vectors being computed for the image, the computer arrangement comprising processing means and a memory, the computer program product, after being loaded, providing said processing means with the capability to carry out:

5 - computing a model-based motion vector for the pixel on basis of a motion model being determined on basis of a part of (402-436) a motion vector field (400) of the image;

10 - comparing the model-based motion vector with each of the motion vectors of the set of motion vectors; and

- selecting a particular motion vector of the set of motion vectors on basis of the comparing and for assigning the particular motion vector as the background motion vector.